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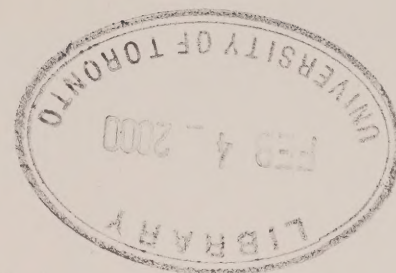


Petroleum products highlights



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The petroleum products industry is a strategic component of Canada's industrial infrastructure. Canadians currently enjoy self-sufficiency in petroleum products, which are expected to be the fuel of choice for consumers well into the 21st century. The industry is capital-intensive and highly competitive, with a strong domestic focus. It comprises two subsectors: refining and marketing.



Petroleum products are the fuel source for virtually all transportation in Canada and provide critical feedstock supplies to other major industry sectors. The industry is a critical source of revenue for governments, collecting about \$9 billion annually in federal and provincial taxes on gasoline alone. Some 105 000 people are employed, and revenues of \$25 billion were generated in 1994. The refinery work force is highly educated and generates one of the highest levels of value-added in Canadian manufacturing.

The exploration, extraction and processing of natural resources has traditionally been the foundation on which the Canadian economy has been built. The Canadian petroleum products industry continues to provide an important basis for this country's wealth and security, even as the economy diversifies into other sectors.

### **Trade**

Canada is a net exporter of petroleum products, with a positive trade balance of \$1.0 billion in 1994 and \$1.2 billion in 1995. Canada's trade surplus with the United States was \$1.5 billion in 1994 and \$1.6 billion in 1995. In 1995, Canada exported some 40 000 cubic metres per day, compared with 23 000 cubic metres imported. Almost all product exports go to the U.S. market, with the majority originating in Canada's Atlantic refineries.

## **Technology**

Technology is a concern in the extraction and production arm of the petroleum industry, where techniques must be adapted to capitalize on the latest technological advances. However, for the purpose of this document, which deals with the refining and products marketing side, technology has attained a certain level of maturity and, except for occasional updates, no major breakthroughs are anticipated.

## **Human Resources**

Of the more than 105 000 people employed in the petroleum industry, approximately 10 900 are in refineries and the remainder are in products distribution and marketing operations. The refinery work force has one of the highest levels of value-added in Canadian manufacturing, at about \$196 000 of value-added per employee. In general, refinery jobs are high in skills and knowledge requirements.

## **Investment**

Petroleum refining is a highly capital-intensive industry, requiring 8.0 units of capital for every unit of value-added output. This far outweighs the average capital intensity for all manufacturing industries of 2.6. In each of 1993 and 1994, capital expenditures in refining and marketing were approximately \$400 million, for a total of \$800 million.

## **1.1 Major Trends**

### **Evolution of the Market**

Although the industry anticipates little or no growth in the overall demand for petroleum products over the next several years, a modest growth in diesel and aviation fuels is expected. However, there may well be an attendant decline in demand for motor gasoline due to improved fuel efficiencies in the Canadian vehicle fleet.

The refining industry must remain competitive in the global market by optimizing the utilization of its asset base and continuing to emphasize cost control and industry rationalization. Ultimately, the industry must be prepared to deliver products that can compete with readily available imports. In addition, the petroleum products sector will continue to seek out new markets and increase market penetration into certain areas of the U.S.

Ontario refiners are at the end of the Interprovincial Pipe Line system, and are therefore vulnerable to higher acquisition costs for western Canadian crude. They are currently evaluating the feasibility of reversing the direction of flow in the Sarnia-to-Montreal pipeline in the near future. This would allow greater flexibility for Ontario refineries to access imported crude and thus seek the most economical source of crude. The potential impacts of this decision, particularly with regard to the impact on Ontario refiners and western crude producers, must be carefully analyzed.

## **Restructuring**

The industry has already undergone major restructuring necessitated by long-term declines in demand coupled with intense competition in the marketplace. The number of refineries has dropped from 40 in the early 1980s to 21 in 1995. The industry must continue to control operating and feedstock costs in order to maintain competitive margins with the United States. Also, crude oil acquisition costs continue to be an issue, since Canadian processing capability, which is complex by global standards, still lags the U.S. with respect to the processing of cheaper, heavier crudes. Necessary adjustments in this respect will help meet competition from U.S. refiners, while maintaining healthy profit margins. Industry Canada will work with industry and other stakeholders to ensure that further rationalization enhances the competitiveness of Canada's petroleum industry, while keeping competition healthy among domestic refiners.

## **Pricing and Retail End Rationalization**

Approximately 75 percent of refining and marketing revenues in Canada is absorbed by crude costs and excise taxes. The remaining 25 percent covers operating costs (15 percent), labour and income taxes (7 percent), leaving 3 percent for profits. Canadian marketing margins are considered low relative to those in the U.S. Although it is difficult to compare retail margins with operating costs because of the rapid and still ongoing decline in the number of service stations in Canada, it seems that revenue shortfalls are not uncommon, particularly in southern Ontario. Rationalization of the retailing sector may have to continue, since there are twice as many service stations in Canada in proportion to population as there are in the United States. With relatively low retail margins on gasoline, Canadian retail operators have had to turn to secondary sources of income such as convenience stores, car washes, etc., in order to remain viable. A problem here is high exit barriers, reflected in the site clean-up costs for unprofitable gasoline retail operations. Industry Canada will work with industry stakeholders to achieve more rationalization while striving to minimize the impact on competition and job creation in the retail sector.

## **Sustainable Development**

Environment Canada and the Canadian Petroleum Products Institute (CPPI) have recently developed scenarios for the anticipated environmental requirements for the Canadian refinery industry over the next two decades. The costs associated with these projected scenarios are high, and present major challenges for the industry. The most pressing environmental challenges over the next decade concern the need to produce more environmentally friendly transportation fuels (i.e. reformulated gasoline and diesel fuels). Even though technology exists for producing highly reformulated fuels, the investment costs are high; the health and environmental benefits must be carefully weighed against these costs to ensure cost effectiveness.

The challenge also exists to continue to respond to technological changes in the automotive industry that require compatibility between transportation fuels and vehicle engine technology. Significant improvements in engine performance and emission levels have been made over the past 20 years: carbon monoxide (CO) and hydrocarbon (HC) levels are down by 96 percent,

and nitrogen oxide (NO<sub>x</sub>) is down 76 percent, but there remains more scope for improvements through joint efforts between the two industries.

As part of its agenda to ease and simplify the regulatory impact on business, Industry Canada is involved in discussions with the industry and other stakeholders. The objective is to allow the industry to recover incremental costs while the consumer continues to receive low-cost, high-quality, environmentally safe products. This strategy may entail joint priority setting between government and industry to ensure that environmental regulations are based on a scientifically sound agenda that allows for industry competitiveness and affordability.

Consideration will be given to review of the rates of return assigned to regulated industries in Canada, particularly pipelines and electrical utilities, which impact upon the profitability of the petroleum products industry.

These and other issues will be subject to consultations between Industry Canada, the petroleum products industry and other stakeholders, and will be addressed in the upcoming *Framework for Action* document.







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